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## **Mexico**

### **Grain and Feed Annual**

#### **February Freeze Impacts Marketing Year 2010/11 Crop Production Forecast**

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**Report Highlights:**

Cold weather in early February damaged large areas planted to corn, wheat, and dry beans. The production estimates for marketing year (MY)2010/11 are 21.5 million metric tons (MMT) corn, 7.1 MMT sorghum, 3.65 MMT wheat, 150,000 MT rice (milled basis) and one MMT dry beans. The outyear (MY2011/12) forecast for corn, wheat, and dry beans assumes normal weather conditions plus increased planted area and production as a response to higher global prices. The outyear sorghum production forecast is reduced as producers should shift back to corn.

**Commodities:**

Wheat

Wheat, Durum

**Production:**

Post/New total wheat production and harvested area estimates for MY2010/11 (July/June) have been revised downward, based on updated official data and private source information. It reflects the adverse impact of cold temperatures in the key fall/winter wheat production areas of Sonora and Baja California. Both had nearly all of the anticipated planted area seeded at the time of the freeze and should have been relatively far along in the growing process. In some regions, including the south of Sonora, the temperature fell to 16 degrees Celsius below zero.

According to official sources, the main wheat areas affected by the cold temperatures were in the Mayo and Yaqui river valleys of southern Sonora. Sources report approximately 250,000 hectares (ha) were affected, which should reduce yields approximately one metric ton per hectare in those areas. The average yield expected in Sonora before the frost was approximately 6.0 MT/ha. Other wheat-producing areas in Sonora (e.g., Hermosillo and Caborca) and Baja California (e.g., Mexicali) did not report any damage. Sources indicate, however, that it will be difficult to determine how badly the wheat crop was damaged until harvest. Sources report that Sonoran wheat is often used for feed and, as such, any damage to quality will not have much impact on its final use.

For MY2011/12 Post/New total Mexican wheat production is forecast to increase to 4.1 MMT as a result of higher planted area and normal yields. This assumes, as well, that any infrastructure damage because of the April 2010 earthquake in the Mexicali area can be addressed. Industry sources stated that despite an increase in input costs, high international wheat prices along with the Forward Contract Program continue to push wheat production higher, which has seen wheat acreage increase by more than 55 percent since MY 2004/05. During that same period, production increased 50 percent, or 1.4 MMT. According to industry sources approximately 4.0 MMT could be sold in the 2011/12 fall/winter crop cycle through this program. The trend of increased acreage and production is expected to continue provided that there are no water shortages and as long as the Forward Contract Program continues. The Post/New MY2009/10 estimate reflects official data from Secretariat of Agriculture, Livestock, Rural Development and Fishery (SAGARPA).

In Mexico, two wheat crops are grown annually. A spring/summer cycle produces about 10 percent and a fall/winter cycle, approximately 90 percent, with the harvest taking place in May and June. The higher importance of the fall/winter cycle is due to the weather conditions prevailing at that time of year in the north and northwestern states, as higher moisture and warm temperatures are basic conditions for proper crop development. Mexico produces two wheat varieties: durum (or crystalline) and milling wheat. Mexico imports more wheat than it exports. Typically, Mexico produces less of bread varieties

(i.e., hard red winter and hard red spring) and more durum. Mexican producers find that durum wheat is easier to grow and yields more than other varieties.

Despite the partial damage due to the cold temperatures, Sonora continues to be the main producing state with approximately 41 percent of total production, followed by Guanajuato, which contributes 18 percent, and Baja California with 14 percent. Durum wheat continues to be the principal crop in Sonora and Baja California. According to trade sources, the Bajío region (Guanajuato, Michoacán, and Jalisco) continues to increase gradually its planted area of milling and soft varieties. The majority of the wheat grown in the north and northwestern states of Baja California and Sonora is produced using advanced technology similar to that used in the United States.

Pasta, the major end-product derived from durum wheat, is not consumed at a high rate in Mexico, but durum yields are higher than for bread wheat in the desert regions of Baja California and Sonora, making it the varietal choice for producers. As much as 40 percent of Mexican durum production is marketed as animal feed. During the past five years, the states of Sonora and Baja California have accounted for between 55 to 60 percent of total Mexican production. Since most of the wheat production in the major growing regions is irrigated, average yields are expected to remain around 5.1 MT/ha. According to SAGARPA, nearly 75 percent of the nationwide wheat planted area is irrigated.

#### **Consumption:**

Mexico's consumption is expected to increase slightly in MY2011/12 due to population growth and the continued consumer purchasing power recovery. According to industry sources, consumer purchasing power in MY2010/11 registered a slight recovery due to the economic growth and this trend is forecast to continue for MY2011/12. Sources stated that while Mexico's economic rebound in 2010 was initially externally-driven, recent data suggests that domestic demand is now leading the recovery as attested by recent data from supermarket and retail sales indicating that a domestic recovery is occurring.

According to the National Association of Mexican Wheat Millers (CANIMOLT), in the last six years per-capita wheat flour (including semolina) consumption has increased 14 percent (from 35 kilograms to 40 kilograms). This increase is, in part, due to the growing popularity of bread consumption throughout Mexico.

The Post/New feed consumption estimate for MY2010/11 has been increased to 350,000 MT. Sources state that due to lower domestic corn production, feed manufacturers will substitute domestic durum in feed rations rather than sorghum because of the higher nutritional value. For MY 2009/10, the Post/New consumption estimate (including feed consumption) reflects updated private and government data.

#### **Trade:**

The Post/New total wheat import forecast of 3.1 MMT for MY2011/12 is estimated to decline from the MY 2010/11 revised Post/New estimate of 3.5 MMT, due to an increase in domestic production. Price competitiveness will decide the import origin. The Post/New import estimate for MY2010/11 has been increased to 3.5 MMT from the USDA/Official estimate because of lower-than-previously estimated domestic production.

Many Mexican millers continue purchasing U.S. wheat due to ease of shipments. The Post/New import estimate from the United States for MY2009/10 reflects official data. Mexico is the third largest buyer of spring wheat from the United States and this trend is expected to continue for MY2011/12.

The wheat milling industry continues to be one of the most important consumers of U.S. wheat. Based on CANIMOLT'S information, Mexico has 93 different millers that process approximately 4.64 MMT of wheat and produce 4.1 MMT of wheat flour each year. The millers have a capacity of approximately 8.2 MMT of production.

The Post/New MY2011/12 forecast for Mexican wheat exports is estimated to increase approximately 14.3 percent in comparison with the Post/New revised estimate of MY2010/11. This is due to attractive international prices as well as an increase in domestic production. Mexico is the fourth larger exporter of durum in the world. The Post/New export estimate for MY 2009/10 has been revised downward based on official trade data from SAGARPA and SHCP.

**Stocks:**

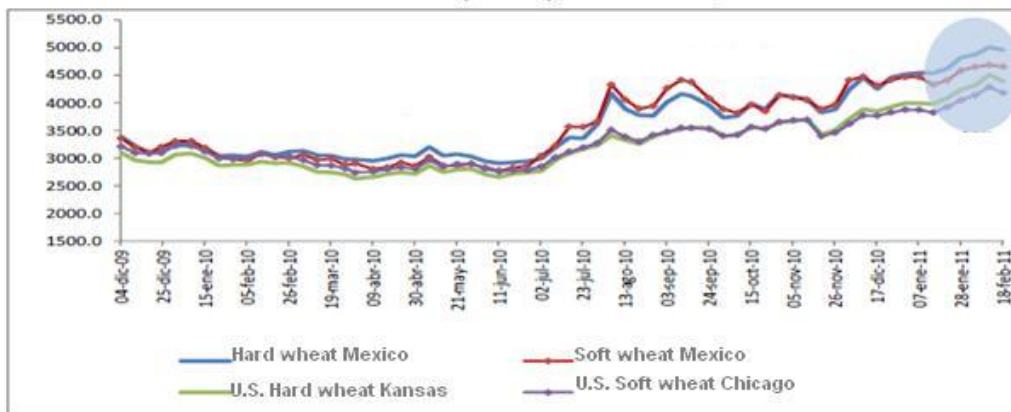
For MY2011/12, the Post/New ending stocks forecast is estimated to decrease to 416,000 MT due to bullish domestic consumption. Private sources stated that millers keep an estimated six-week supply of imported wheat at any given time and MY2011/12 is expected to be similar. The Post/New ending stock estimate for MY2010/11 has been revised downward to 466,000 MT, from the USDA/Official estimate, due to lower-than-previously-estimated domestic production. The Post/New MY2009/10 ending stock estimate reflects official data.

## Production, Supply and Demand Data Statistics:

Table 1. Mexico: Wheat Production, Supply and Demand for MY 2009/10 to 2001/12

Wheat Mexico	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Jul 2009		Market Year Begin: Jul 2010		Market Year Begin: Jul 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	870	828	742	686		800
Beginning Stocks	315	315	772	366		466
Production	4,300	4,148	3,900	3,650		4,100
MY Imports	3,196	2,662	3,500	3,500		3,100
TY Imports	3,196	2,662	3,500	3,500		3,100
TY Imp. from U.S.	2,152	1,900	0	3,500		3,100
Total Supply	7,811	7,125	8,172	7,516		7,666
MY Exports	839	709	1,000	700		800
TY Exports	839	709	1,000	700		800
Feed and Residual	250	250	250	350		250
FSI Consumption	5,950	5,800	6,200	6,000		6,200
Total Consumption	6,200	6,050	6,450	6,350		6,450
Ending Stocks	772	366	722	466		416
Total Distribution	7,811	7,125	8,172	7,516		7,666
1000 HA, 1000 MT						

Figure 1. Mexico: Weekly Prices for Hard and Soft Wheat in Mexico and the United States in pesos per metric ton  
Hard & Soft Wheat Market Prices in Mexico\* and in the U.S.  
2009-2011 (pesos per ton)



\* Average weekly market prices in consumption area

Note: Future prices correspond to the Dec 11 contract. Source: GCMA, Reuters

**Table 2. Mexico: Annual Average Prices of Soft and Durum Wheat in Mexico for 2008 to 2011**

	Soft			Durum		
	Pesos/MT	Percent Change	Standard Deviation	Pesos/MT	Percent Change	Standard Deviation
2008	3689.6		724.3	4121.8		620.0
2009	3092.7	-16.2	192.7	3471.2	-15.8	289.6
2010	3499.6	13.2	601.5	3499.8	0.8	518.3
2011*	4406.9	25.9	NA	4569.1	30.6	NA

\*YTD

Source: Reuters and GCMA

**Author Defined:****Commodities:**

Corn

**Production:**

The Post/New corn production estimate for MY2010/11 has been revised downward from the USDA/Official estimate by 2.3 percent to 21.5 MMT due to adverse weather conditions and lower harvested area. Unusually cold weather in northern Mexico during the beginning of February severely damaged the corn crop in the state of Sinaloa. Initially, official and private sources estimated the losses to reach approximately 3.9 MMT of corn, which represented 16 percent of Mexico's annual harvest. However, Mexico's SAGARPA announced on February 11, 2011, a program to re-seed 300,000 ha of white corn and 150,000 ha of sorghum, which would compensate partially for these losses and allow Sinaloa corn production to reach approximately 2.425 MMT. Noting that SAGARPA was forecasting Sinaloa white corn production to reach 4.532 MMT in the fall/winter 2010/11 planting, this implies a reduction of 2.107 MMT. FAS/Mexico's estimate of corn production for the 2010 spring/summer harvest is expected to be lower than initially predicted, as well, as harvested area was lower than forecast (see 2011 GAIN Report [MX1006 January Update for Corn and Rice](#) and [MX1012 Hard Freeze Damages Sinaloa Corn and Produce](#)).

In spite of Mexico's Secretary of Agriculture's forecast that total corn production could reach 23.3 MMT for MY2010/11, several sources, both private-sector and within the Government of Mexico (GOM), have underscored that this perspective is overly optimistic. These sources agree that MY2010/11 corn production may reach no greater than 21.5 MMT.

The frost in Sinaloa is of special interest as that state accounts for approximately 71 percent of Mexico's fall/winter white corn production. Nearly all of the corn produced in Sinaloa is consumed in other states. According to unofficial information from the Sinaloa government, almost all white corn planted

in the area was damaged. However, SAGARPA official data state that 75,000 ha of Sinaloa planted area was spared the freezing temperatures and can expect yields of approximately seven MT/ha

Sources in the private sector as well as at research institutes have stated that SAGARPA will be unable to re-plant 300,000 ha to save this season's corn crop as seed, especially short-season white corn seed, cannot be secured. However, other private and official sources have insisted that Sinaloa would be able to re-plant enough land to produce 2.45 MMT by the end of the 2010/11 fall/winter crop season. SAGARPA established that the corn in Sinaloa must be replanted no later than March 10, 2011, as otherwise, yields would suffer substantially (i.e., the harvest would stretch into July and August and heat stress would reduce yields and production). Despite the fact the corn was replanted quickly on substantial tracts of land (approximately 250,000 ha by March 8), yields are expected to reach no more than seven MT/ha on these grounds, versus the normal average yield of 10.5 MT/ha in Sinaloa.

The Post/New MY2011/12 corn production forecast is 24.2 MMT with harvested area, assuming normal weather conditions, estimated at 7.35 million ha. According to industry sources, corn producers had a poor MY2010/11 and should increase harvested area as well as production so long as enough moisture is available for next summer's corn planting and high international grain prices persist.

Mexico is the fourth largest corn producing country in the world, and white corn accounts for 75 percent of total production while yellow corn represents only six percent. Other types of corn account for 19 percent of total corn production, including blue corn and other creoles (landraces), popcorn, and small amounts of sweet corn. Corn is grown throughout the year during two seasons: spring-summer (April-March) and fall-winter (October-September). Approximately 77 percent of Mexican corn is obtained from the spring-summer season and 65 percent of the corn is produced using dry land (versus irrigated) farming.

Corn is produced in all regions of Mexico in a wide range of agro-climatically diverse conditions by growers who differ in resource endowments, managerial structures, and technical skills. Approximately 70 percent of total production comes from eight states: Sinaloa, Jalisco, Mexico, Chiapas, Michoacan, Veracruz, Guerrero, and Chihuahua. Moreover, corn production in Mexico is divided into two categories: commercial and traditional. Commercial production is practiced by large and medium growers, who produce white and/or yellow corn, while traditional production refers to small-scale and subsistence farmers who specialize mostly in white corn production. Commercial producers generally obtain higher yields and use more inputs and technology than traditional farmers.

Yields continue to vary significantly throughout the country, depending in large part on the level of technology used. The average yield for the MY2011/12 corn crop in Mexico is forecast at 3.3 MT/ha. However, Sonora and Sinaloa traditionally have yields similar to those obtained in the United States for both white and yellow corn. Due to the frost problems mentioned above, these states will register lower yields in MY2010/11.

One of the main characteristics of corn production in Mexico is the high degree of land fragmentation. According to SAGARPA, there are nearly two million corn producers in Mexico, and more than 85 percent of those growers have landholdings smaller than 5 hectares. In Veracruz and Oaxaca, for example, more than 75 percent of growers produce on less than 2 hectares. In Sinaloa and Jalisco, the states with the least fragmentation, only 57 percent of growers produce on more than 5 hectares.



Transportation, storage, and marketing continue to be sources of unnecessary high costs and bottlenecks in the Mexican corn sector. Long distances from fields to consumption centers, reliance on expensive trucking, inadequate road infrastructure, and the lack of direct railroad links at key transport hubs (especially at ports and markets) have thwarted efforts to create an integrated market from farmers to consumers. Furthermore, Mexico has a substandard storage network that lacks effective instruments for financing inventories in warehouses. Similarly, the rising cost of fuel is another factor that has affected corn prices. The competitiveness of Mexican growers is hampered relative to U.S. imports, with nearly all imports coming via rail and/or ship, since most internal movement of Mexican production is by higher-cost trucking.

Despite the GOM's continued granting of environmental testing permits to developers of genetically engineered (GE) corn and other crops (see 2010 GAIN Report [MX0044 Mexican Government Continues to Support Biotech Crops](#) and 2011 GAIN Report [MX1102 2010 Biotech Corn Permits Issued](#)), as of March 2011, Mexico has granted permission for only one pilot test of GE corn. The GOM does not seem interested in expediting GE corn pilot testing even in the face of high international grain prices. Rather, the GOM is taking a measured approach that abides by Mexican regulations and is cautiously evaluating and approving requests.

Non-GE hybrid corn, which has been shown to increase yields and is used for most production in Sinaloa, has not been widely adopted in most other areas due to a combination of legal and technical issues in spite of high international grain prices, as well.

### **Corn Prices**

There is some disconnect between Mexico's and the world's corn commodity prices. Mexico has not seen as dramatic an increase over the past marketing year as world prices are quoted for yellow corn and most Mexico corn is white. In addition, the GOM has a number of programs (see Policy Section) that manage the risk of high prices for industrial and other end-users. Reports indicate the GOM has increased the vigilance with which it is monitoring domestic prices in order to prevent potential pricing collusion.

### **Consumption:**

The Post/New total consumption estimate for MY2010/11 has been revised downward based on information from private sources. Feed consumption is expected to shift somewhat from corn to sorghum, due to lower than previously estimated domestic corn production. Similarly, the Post/New total consumption estimate for MY2009/10 has been revised downward from USDA/Official estimates based on official Mexican data

For MY2011/12, total consumption is forecast to increase 1.3 percent compared to the previous year's revised estimate. This increase is driven by expectations of population growth and slight growth in the Mexican livestock and poultry sectors.

The poultry sector continues to be the major consumer of feed grains in Mexico. According to animal feed industry contacts, for the poultry sector, 40 percent of feed grains is sourced domestically while the remaining 60 percent is imported. Some poultry producers stated that approximately 73 percent of the



total demand for feed grains is currently covered using risk management tools mitigating the impact of high grain prices.

Poultry producers have expressed their intention to avoid unexpectedly strong increases in broiler production costs, as occurred during the record high grain prices in 2007 and 2008. Thus for MY 2010/11, they are hedging against such price risks using the GOM's "Forward Contract Program" (see Policy Section), under which the price-risk volatility for domestic corn and sorghum is covered. In addition, larger poultry producing companies have bought futures contracts to cover the price risk for imported grains and continue to produce their own grains. Thus, price volatility in grains will affect only a part of broiler production, principally medium and small-scale producers. According to animal feed industry sources, similar hedging practices have been followed by larger pork and beef producers. In general, private sources estimate that livestock producers and starch manufacturers are covered with forward contracts until the end of the calendar year (CY) 2011.

According to industry sources, feed manufacturers have not changed feed formulas in response to increasing grain prices. Usually, feed compounders only exchange sorghum for corn when the sorghum price equals 90 to 92 percent of the corn price. Sources stated the poultry industry is most likely to make this change when market conditions allow. Other livestock producers, like hog farmers, are not changing feed formulas as they normally use soy as the main feed component.

Mexico is the third largest consumer of corn in the world, after the United States and China. Although corn in Mexico is produced mainly during the spring/summer crop cycle, demand exists throughout the year. In Mexico, there are about 9,000 corn mills that process white corn into flour and about 60,000 tortilla shops (*tortillerias*), where tortillas are produced for immediate consumption. Corn continues to be the most important staple crop in Mexico, with consumption of corn and tortillas accounting for about 47 percent of average caloric intake. Although per-capita tortilla consumption dropped 25 percent between 1997 and 2007 (from 120 kilograms to 90 kilograms), it is still the most important component of the Mexican diet.

Yellow corn is generally used to produce cornstarch, cereals, and animal feed. According to SAGARPA, approximately 50 percent of the yellow corn in Mexico is used by the livestock industry. Cornstarch production uses nearly 2.3 MMT of yellow corn annually; 90 to 95 percent of the cornstarch is produced using corn imported from the United States.

**Trade:**

The Post/New import estimate for MY2010/11 has been increased to 8.9 MMT due to lower-than-previously estimated domestic production, while the Post/New import estimate was revised downward for MY2009/10 in order to reflect official data from SAGARPA and the General Customs Directorate of the Finance Secretariat (SHCP). Similarly, Post/New export figures for MY2009/10 and MY2010/11 have been decreased based on SAGARPA and SHCP final data for the first marketing year, and private source estimates for the second marketing year. These private sources pointed out that because of the adverse impact of cold weather in Sinaloa and other states, Mexico's corn exports, if any, should be minimal in MY2010/11.

The Post/New total corn import forecast for MY2011/12 is expected to decrease approximately 6.7 percent compared to MY2010/11, to 8.3 MMT, due to an increase in domestic production. Also, in

MY2011/12, Mexico is forecast to export approximately 300,000 MT, due to attractive international prices as well as an increase in domestic production.

**Stocks:**

Post/New MY2011/12 ending stocks are forecast to increase to 2.5 MMT due to an increase in domestic production. The Post/New MY2009/10 stock estimate has been increased from USDA/Official estimates to reflect more recent information. However, the MY2010/11 stock estimate has been decreased due to lower domestic production.

According to animal feed industry sources, SAGARPA, through ASERCA (the Support and Services for Agricultural and Livestock Trade (Paying Agency)), is conducting a detailed record of corn, sorghum and wheat stocks in Mexico. However, this information is not published. The rationale for this detailed record is that ASERCA handles the Forward Contract Program and must maintain an accurate database of grain and oilseed production and stock levels.

Since March 2010, SAGARPA's Food and Fisheries Statistics Service (SIAP) has ceased releasing information on grain and oilseed stocks that were regularly published on its website and called "Availability-Consumption Balance (ACB)." These ACB reports included information on production, imports, exports, and stocks of different commodities. According to SAGARPA, the official reason to stop publishing this information was due to the need to review the methodology for collecting this information from various industries and the need to collect data with greater accuracy.

**Policy:**

Under the Mexican domestic agricultural support program, PROCAMPO, a flat-rate payment for corn, sorghum, wheat, rice, and dry beans was provided to farmers for the 2010 spring/summer crop cycle. On April 8, 2009, SAGARPA announced in the Mexican Federal Register (*Diario Oficial*) modifications to the operational rules of PROCAMPO for the 2009 through 2012 spring/summer planting seasons. The support payments are between 963 to 1,300 pesos per hectare (\$78.93 – 106.55/ha), depending on the number of hectares each producer has registered in the program. Additionally, in 2009, SAGARPA reduced the maximum payment limit under the program to 100,000 pesos (roughly \$8,197), regardless of total area under production (See 2009 GAIN Report [MX9020 Mexico Announces Changes to Support Program](#)).

The GOM continues to encourage forward contract purchases between farmers and buyers through the Forward Contract Program, *Agricultura por Contrato*, (see 2008 GAIN Report [MX8075 Mexico Announces Support Program for Sinaloa White Corn](#)). The program is designed for producers, traders and consumers of corn, wheat, sorghum, soybean, safflower, cotton, coffee, orange juice and livestock products (beef and pork), and recently added cocoa and coverage for agricultural and fishing inputs such as fertilizers, natural gas (and derivatives), and diesel.

According to ASERCA, SAGARPA provided support for the production of 10.4 MMT of corn, 4.2 MMT of sorghum, and 2.9 MMT of wheat in calendar year 2010. Industry sources stated that this Program is a novel subsidy system based on market prices and tools that facilitates price stability, merchandising, and marketing for Mexican producers of several grains. The Forward Contract Program includes a complex mechanism to purchase put and call options for grain and oilseed growers and the processing industry. Sources report that supports under this program are defined as non-product

specific as they are available to producers of several grains and oilseeds. Moreover, the mechanism is based on world prices, thereby diminishing the risk of the system being defined as price distorting.

On February 17, 21 and 25, 2011, the GOM published three decrees in Mexico's Federal Register detailing tax benefits to support those affected in the states of Sinaloa, Sonora, and Tamaulipas by freezing temperatures in early February. In general, the measures provide leniency, with respect to reporting and payment deadlines, normally required of individuals and companies that make tax payments. The measures, however, do not forgive the payment of taxes. Sources have stated that these measures have allowed producers affected by the adverse weather to have cash flows that offset the losses of their crops.

As a part of the Sinaloa replanting program announced on February 11, 2011, the GOM announced that it would provide credit for replacement seed acquisition at a 5.75 percent annual interest rate with no interest payments for 90 days from February 4, 2011. This credit will be given by the governmental Rural Financial Institution (*Financiera Rural*). Sources report average interest rates for this type of credit are typically between 11 and 12 percent annually.

**Marketing:**

The rising dependence on corn imports is the result of increased corn use, as an input for either food or feed in Mexico, as well as inefficiency in shipping domestic corn throughout the country. Growers face a variety of production challenges but, with the expected recovery in domestic consumption, the situation will even more challenging in the next few years. Most small producers have limited market access and often sell their product at low prices to local market intermediaries who then capture larger profits. This situation affects most of the agricultural growers in Mexico, especially small- and medium-sized traditional farmers. Lack of technology, market intermediaries, corruption, low yields and inefficiency in their marketing system are some of the problems that most of the corn growers in Mexico face in the transition from a more subsistence agricultural system to a market-based system.

## Production, Supply and Demand Data Statistics:

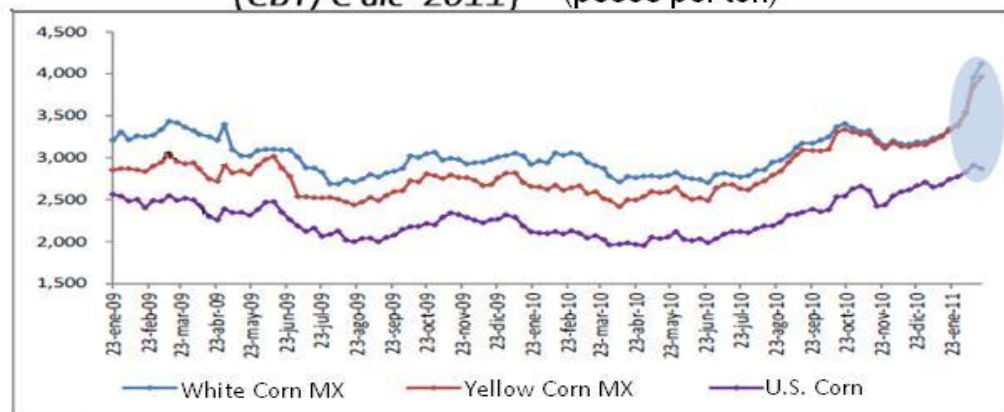
Table 3. Mexico: Corn Production, Supply and Demand for MY 2009/10 to 2001/12

Corn Mexico	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	6,280	6,280	6,600	6,650		7,350
Beginning Stocks	3,559	3,559	1,389	1,409		1,209
Production	20,374	20,374	22,000	21,500		24,250
MY Imports	8,298	8,108	9,000	8,900		8,300
TY Imports	8,298	8,108	9,000	8,800		8,300
TY Imp. from U.S.	8,254	8,108	0	8,800		8,300
Total Supply	32,231	32,041	32,389	31,809		33,759
MY Exports	642	632	100	0		300
TY Exports	642	32	100	0		300
Feed and Residual	14,200	14,000	15,000	14,500		14,700
FSI Consumption	16,000	16,000	15,800	16,100		16,300
Total Consumption	30,200	30,000	30,800	30,600		31,000
Ending Stocks	1,389	1,409	1,489	1,209		2,459
Total Distribution	32,231	32,041	32,389	31,809		33,759

1000 HA, 1000 MT

Figure 2. Mexico: Weekly Prices for White and Yellow Mexican Corn and U.S. Corn in pesos per metric ton  
Weekly market prices in Mexico\* vs. U.S. 2009-2011

(CBT/C dic-2011) (pesos per ton)



\* Bulk prices in the consumption area in Mexico City. Source: Reuters & GCMA

**Table 4. Mexico: Annual Average Prices of White and Yellow Corn in Mexico for 2008 to 2011**

	White			Yellow		
	Pesos/MT	Percent Change	Standard Deviation	Pesos/MT	Percent Change	Standard Deviation
2008	3079.8		257.6	2974.1		202.0
2009	3049.3	-1.0	201.4	2748.3	-7.7	161.5
2010	2985.9	-2.1	201.5	2803.8	2.0	279.4
2011*	3278.9	9.8	NA	3257.6	16.2	NA

\*YTD

Source: Reuters and GCMA

**TABLE 5. Mexico: Annual Compound Feed Capacity, Production, and Demand by Livestock Sector for 2006 to 2010.**

### Mexico: Production of Feed and Feed Ingredients (000 Metric Tons)

Calendar Year:	2006	2007	2008	2009	2010/e
<b>Compound Feed Capacity</b>	32,900	33,500	34,000	34,000	34,000
<b>Total Compound Feed Produced</b>	25,600	26,100	26,600	27,000	27,300
---- by integrated producers	16,158	16,435	16,751	16,997	17,200
---- by commercial producers	9,442	9,665	9,849	10,003	10,100
Marketing Year: (000 Metric Tons) Feed Production by type of animal	2006	2007	2008	2009	Forecast 2010
<b>Poultry</b>	13,400	13,500	13,728	14,039	14,200
<b>Pork</b>	3,866	4,000	4,030	4,035	4,050
<b>Beef Cattle</b>	2,395	2,500	2,550	2,600	2,652
<b>Dairy Cattle</b>	4,322	4,400	4,503	4,504	4,543
<b>Aquaculture</b>	205	220	240	250	268

Source: National Council of Feed Producers and Animal Nutrition (Consejo Nacional de Fabricantes de Alimentos Balanceados y de la Nutrición Animal, A.C.)

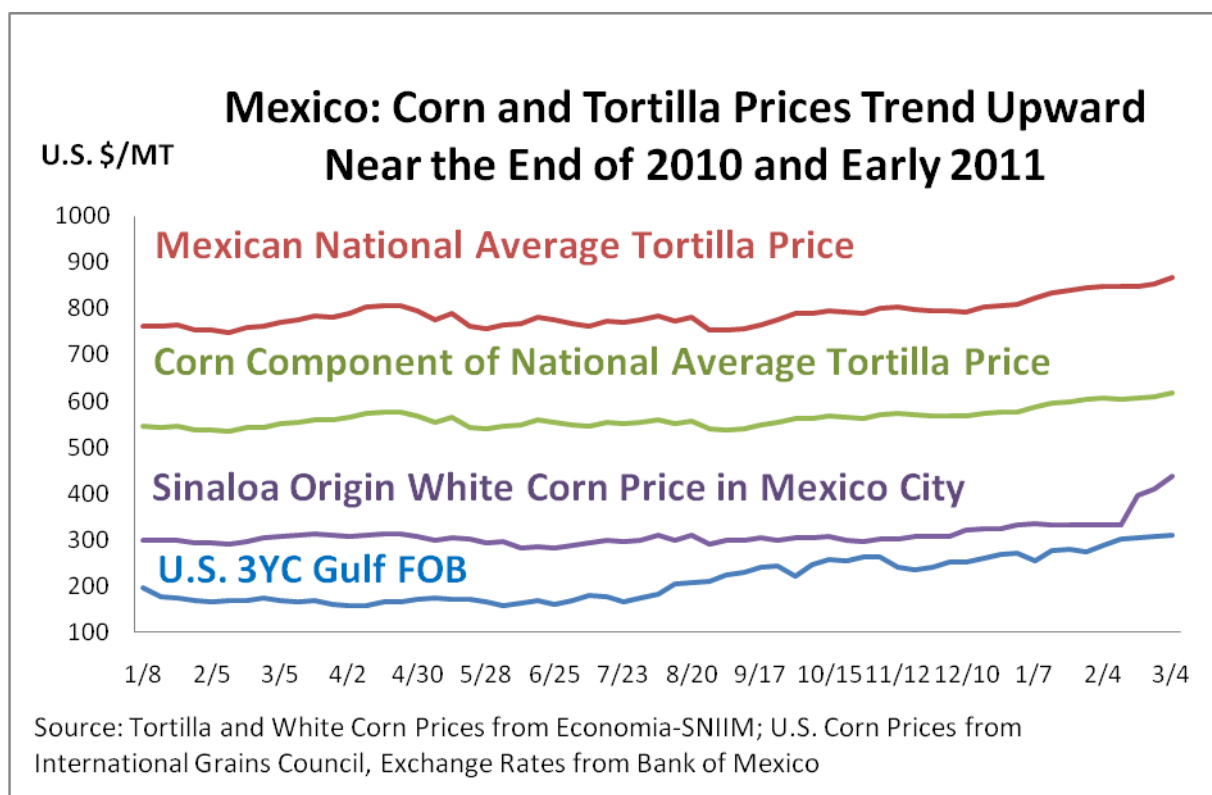
### Author Defined:

#### Corn and Tortilla Prices

As U.S. No. 3 yellow corn prices began moving higher in the second half of 2010, Mexico's white corn and tortilla prices increased only modestly. However, after the freeze in northern Mexico in early February, white corn prices spiked higher (see Figure 1), but tortilla prices remained relatively flat. Possible causes for the lower rate of increase in tortilla prices in comparison with global commodity prices could stem from the hedging programs instituted by the GOM as well as domestic support programs for producers and the tortilla manufacturing industry.

A note about the graph: Mexican tortilla and white corn prices are recorded by the Secretariat of Economy in pesos per kilogram at wholesale markets throughout the country. The prices in the figure are nominal prices converted to U.S. dollars per metric ton by using Bank of Mexico exchange rate date for each of the tortilla and corn price data points. The corn component of the national average tortilla price is calculated using industry information that suggests 1.0 MT of corn produces 1.4 MT of tortillas. The U.S. No. 3 yellow corn price is from the International Grains Council.

**Figure 3. Mexico: Corn and Tortilla Prices Trend Upward Near the End of 2010**



## Commodities:

Sorghum

## Production:

The Post/New total Mexican sorghum production estimate for MY2011/12 is forecast at 6.85 MMT, 3.2 percent lower than the previous year's estimate. This decrease is due to a reduction in planted area in Mexico's sorghum producing areas because of an expected switch in planting from sorghum to corn.

Another factor that could drive harvested area downward is the implementation of specific technical support programs under PROMAF (see 2010 GAIN Report [MX0017](#) *Corn Production Forecast to Rebound*). According to official sources, PROMAF promotes several activities to increase sorghum yields (e.g., higher sowing density, promoting the use of bio-fertilizers, and improvements in plant nutrition) rather than increasing planted area. Post/New sorghum harvested area estimate for MY2010/11 has been revised slightly downward based on official data.

Mexico continues to be the world's fourth largest producer of sorghum, and the largest importer of sorghum from the United States. Sorghum production is located throughout the country, with the largest producing states being Guanajuato, Tamaulipas, Michoacán, Sinaloa, and Jalisco (these states account for approximately 75 percent of total sorghum production). Approximately 24 percent of the fall/winter crop and nearly 25 percent of the spring/summer crop are irrigated.



Tamaulipas produces the largest percentage of Mexico's fall/winter crop, and livestock and poultry producers in several neighboring regions are dependent upon it for feed. However, traditional feed millers located in other regions (e.g., the center of the country) have been less aggressive in purchasing sorghum from the Tamaulipas for the fall/winter crop due to transportation and quality issues. Overall crop conditions are reportedly good in Tamaulipas in spite of the cold weather in early February. The expectation is that Tamaulipas will produce approximately 1.9 MMT during the 2010/11 fall/winter crop cycle.

The GOM continues encouraging forward contract purchases between farmers and feed millers through the Forward Contract Program for 2010/11 fall/winter Tamaulipas sorghum. Private sources state that approximately 1.4 MMT has been contracted in Tamaulipas through this program. The harvest season is expected to start in May and end in June.

### **Consumption:**

The forecast for sorghum consumption in MY2011/12 is 10.25 MMT, an increase of approximately 1.5 percent. The main factor for this increase is the slight increase in demand from the livestock and poultry sector. The poultry sector outlook, for example, is moderately optimistic for 2011 in comparison with 2010 (please see 2011 Mexico poultry semi-annual GAIN Report). In general, the outlook for the livestock sector continues to be slightly optimistic in 2011 as economic growth and increasing per capita income continue and should push feed consumption growth higher by nearly two percent. The Mexican economy grew 5.5 percent in 2010, the highest rate since 2000, after having declined 6.1 percent in 2009. The consensus GDP growth forecast average for 2011 is 4.2 percent.

The Post/New feed consumption estimate for MY2010/11 has been revised upward, based on information from the feed millers association and reflects substitution of sorghum for corn, due to lower-than-previously estimated domestic corn production. Sorghum is an important animal feed in Mexico, as good-quality sorghum is regularly available with a nutritional feeding value that is equivalent to that of corn. Sorghum can be processed to further improve its feed value and techniques such as grinding, crushing, steaming, steam flaking, popping and extruding have all been used to enhance the grain for feeding. The products are fed to laying hens and poultry, beef and dairy cattle, and hogs, and are used in pet foods.

### **Trade:**

The Post/New MY2011/12, import forecast is estimated to increase by 300,000 MT to 3.4 MMT over the Post/New MY 2010/11 estimate due to expected decreases in domestic production and the slight increase in demand. The Post/New import estimate for MY2010/11 has been increased to 3.1 MMT based on more current private information, which reveals higher-than-previously-estimated domestic demand. The Post/New MY2009/10 import estimate has been decreased to 2.451 MMT based on official trade data from SAGARPA and SHCP.

### **Stocks:**

Despite a forecast of increased imports, Post/New ending stocks for MY2011/12 are forecast to remain the same as the MY2010/11 Post/New estimate due to an increase in feed consumption. The ending stock estimate for MY 2010/11 has been increased, from USDA/Official estimates, based on



information from private sources. The Post/New stocks estimates for MY2009/10 has been adjusted downward based on lower than previously estimated imports.

#### Policy:

Please see the corn policy section for information.

#### Production, Supply and Demand Data Statistics:

**Table 6 Mexico: Sorghum Production, Supply and Demand for MY 2009/10 to 2001/12**

Sorghum Mexico	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	1,616	1,616	1,850	1,810		1,750
Beginning Stocks	1,336	1,336	414	337		437
Production	6,250	6,250	7,100	7,100		6,850
MY Imports	2,528	2,451	2,400	3,100		3,400
TY Imports	2,528	2,451	2,400	3,100		3,400
TY Imp. from U.S.	2,528	2,451	0	3,100		3,400
Total Supply	10,114	10,037	9,914	10,537		10,687
MY Exports	0		0			
TY Exports	0		0			
Feed and Residual	9,600	9,600	9,400	10,000		10,150
FSI Consumption	100	100	100	100		100
Total Consumption	9,700	9,700	9,500	10,100		10,250
Ending Stocks	414	337	414	437		437
Total Distribution	10,114	10,037	9,914	10,537		10,687
1000 HA, 1000 MT						

#### Commodities:

Rice, Milled

#### Production:

The Post/New rice production estimate for MY2011/12 is forecast to decrease 11.3 percent to 133,000 MT (milled basis) due to smaller planted area. Various industry and GOM sources indicated that Mexican farmers are expected to reduce plantings in the upcoming year in response to lower rice prices. In contrast with the sharp increases registered in the wheat and corn markets, world rice prices in 2010 were down 9 percent compared to one year earlier. As for the coming months, relatively abundant supplies are expected to moderate the pressure stemming from other grain markets.

Another factor that is discouraging rice planting is the lack of financing and the problems generated by the bankruptcy of one of Mexico's major domestic rice milling companies, which traditionally acquired near 35 percent of domestic production (See 2011 GAIN Report [MX1006](#) *January Update for Corn and Rice*).

According to the Mexican Rice Council (MRC), this milling company was sold to a company headquartered in Sinaloa. The MRC stated that the bankruptcy of this company affected a large group of rice producers in several states, such as Nayarit, Colima, Jalisco and Michoacan and that the company owed payments to 500 farmers for their 2010 rice harvest. The MRC reports that if the farmers are not paid, they will most likely be unable to plant their next crop. As a result, the representatives of these producers are negotiating with the GOM to seek compensation.

Veracruz and Campeche are the main rice producing states and account for approximately 52 percent of total national production. Sources indicate planted area will be down significantly for MY2011/12. The Post/New harvested area estimate for MY 2009/10 has been revised downward from USDA/Official estimates. This change reflects the most recent data from SAGARPA (see 2011 GAIN Report [MX1006 January Update for Corn and Rice](#)). Post/New MY2009/10 production and harvested area estimates reflect SAGARPA official data.

Given that most rice production in the major growing regions is irrigated, average yields are expected to remain at about 4.8 MT/per hectare, with yields higher in Veracruz.

### Consumption:

The Post/New MY 2011/12 rice consumption forecast is 865,000 MT, a 5.5 percent increase from the previous marketing year. The three main factors driving rice consumption in MY 2011/12 are competitive prices, population growth, and consumer purchasing power recovery. Moreover, rice continues to be a staple food for the majority of lower income families in Mexico. Post/New MY2009/10 and MY2010/11 consumption estimates remain the same as previous estimates have been bolstered with more accurate and current data from industry sources and official data.

### Trade:

The Post/New import forecast for MY2011/12 is estimated to increase by roughly 10.7 percent because of insufficient domestic production relative to consumer demand. MY2010/11 rice imports remain unchanged from previous estimates. Imports for MY2009/10 reflect official data.

### Stocks:

Post/New ending stocks are forecast to decrease in MY2011/12 to 141,000 MT due to an expected decrease in production. Rice mills continue keeping stock of between one to two months of imported rice. However, due to insufficient domestic production, mills will import between the traditionally short supply months of April to July (between Mexico's two rice crop cycles). Meanwhile, Post/New ending stock estimates for MY2009/10 have been revised modestly downward to 170,000 MT from the USDA/Official estimate due to lower-than-previously estimated domestic production. This is reflected in the downward adjustment for MY 2010/11 carryover, as well.

### Production, Supply and Demand Data Statistics:

Table 7. Mexico: Rice Production, Supply and Demand for MY 2009/10 to 2001/12

Rice, Milled Mexico	2009/2010		2010/2011		2011/2012	
	Market Year Begin: Oct 2009		Market Year Begin: Oct 2010		Market Year Begin: Oct 2011	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	56	55	47	47		40
Beginning Stocks	166	166	171	170		150

<b>Milled Production</b>	178	177	150	150		133
<b>Rough Production</b>	267	265	225	225		199
<b>Milling Rate (.9999)</b>	6,667	6,667	6,667	6,667		6,667
<b>MY Imports</b>	608	608	655	655		725
<b>TY Imports</b>	600	608	655	655		725
<b>TY Imp. from U.S.</b>	0	608	0	655		725
<b>Total Supply</b>	952	951	976	975		1,008
<b>MY Exports</b>	6	6	5	5		2
<b>TY Exports</b>	6	6	5	5		2
<b>Consumption and Residual</b>	775	775	820	820		865
<b>Ending Stocks</b>	171	170	151	150		141
<b>Total Distribution</b>	952	951	976	975		1,008
1000 HA, 1000 MT						

## **Commodities:**

Mixed Grain

## **Production:**

### **DRY BEANS**

#### **Production**

The Post/New Mexican edible dry bean production forecast for MY2010/11 is estimated at 950,000 MT, 5.0 percent lower than the Post/New revised estimate for MY2009/10. The main reason for this decline is lower planted area which official sources stated is a result of lower producer prices. The MY2010/11 production and harvested area estimates were both revised downward. This change reflects the most recent data from SAGARPA, which includes an update for the 2010 spring/summer crop cycle and a preliminary estimate for the 2010/11 fall/winter crop cycle. The Post/New harvested area estimate for MY2009/10 has been revised slightly upward according to the most recent data from SAGARPA. Growers traditionally plant their spring/summer harvest from March to August and harvest it from September to March. Weather, given that over 75 percent of Mexico's bean area is rain-fed, continues being the predominant crop factor. As in the past, the 2010 spring/summer crop cycle is expected to account for approximately 70 percent of total edible dry bean production with the remainder coming from the 2010/11 fall/winter crop cycle.

According to official preliminary information, dry bean production increased by over 3.5 percent during the 2010 spring/summer crop cycle, compared with same crop a year earlier. In Zacatecas, the major dry bean producing state, preliminary information indicates that the 2010 spring/summer crop reached 264,300 MT, which is similar to the production level registered during the 2009 spring/summer crop cycle. Approximately 68 percent of this production constitutes black bean varieties, 24 percent is of clear varieties (Flor de Mayo and Flor de Junio), 1.5 percent is Pintos, and the remainder is of the "Bayo" and "Canario" variety. SAGARPA officials stated that 602,012 ha were planted, which is greater than the original intended beans plantings of 524,694 ha, because unseasonably late rainfalls caused a shifting of hectares from corn to dry beans (primarily black beans). Another factor for the

increase in 2010 spring/summer planted area was the disappearance of the support program to promote the transition of marginal bean areas into other products, such as barley and forage grasses. (Note: Under this program, the GOM granted 20 percent of the seed cost of these alternate products. See 2010 GAIN Report [MX0017](#) *Corn Production Forecast to Rebound*). However, when this support was canceled, growers began planting dry beans again.

SAGARPA officials pointed out that the statewide average yield was approximately 524 kg/ha, which equates to gross revenue of 4,192 pesos/ha at current bean prices of 8 pesos/kg. Sources stated that color damage amounted to 3.5 percent of total black bean production because of the early harvest that growers initiated in order to avoid frosts in December 2010. Some beans were purple; however, sources considered this damage insignificant. In general, low temperatures registered in Zacatecas and other parts of northern Mexico at the beginning of February did not affect the bean crop as all harvest had practically concluded.

For Durango, the second most important dry bean state, official sources reported that preliminary state production for the 2010 spring/summer crop cycle was 100,000 MT. This is approximately 28 percent lower than the previous year. Official sources stated that despite favorable rains during the first months of the 2010 spring/summer crop cycle (i.e., May, June and July), since last September new moisture was scarce or non-existent. As a result, the bean development stage did not progress well in areas that traditionally have late planting seasons. In the most important district of Guadalupe Victoria, nearly 65,000 MT of beans were produced. Approximately 80 percent of the total production is Pinto varieties, 15 percent clear varieties (Flor de Mayo and Flor de Junio) and 5 percent black varieties. The average yield in Durango for the 2010 spring/summer cycle is estimated at 500 kg/ha. In 2009, the average yield was 565 kg/ha.

In Chihuahua, SAGARPA reported total production for the 2010 spring/summer crop cycle was 126,833 MT, most of which is Pinto varieties (approximately 99 percent). SAGARPA sources noted the programmed plantings were for 130,709 ha, but growers planted 154,913 ha. Of the total area planted, 28 percent is irrigated. Sophisticated growers dominate the irrigated area and use hybrid seed, automated irrigation, and advanced agronomic practices. According to industry sources, in general, Chihuahua registered good weather conditions and, as a result, production quality and volume was good.

SAGARPA reported Nayarit's 2010/11 fall/winter crop cycle is having an average season and expects to produce approximately 90,000 MT planted over a surface area of 58,215 ha. Of this production, 50 percent are Jamapa Black. The remaining 50 percent of the production corresponds to colored beans (listed in order of importance: Mayocoba, Azufrado, Peruano, Flor de Mayo and Flor de Junio and other clear and pink varieties, including some 300 ha of pinto beans). Reportedly, sowing conditions are good, the weather is favorable, and farmers expect to realize their intended plantings and yields. Harvesting was scheduled for the first two weeks of March.

In Sinaloa, SAGARPA reported that despite efforts made to avoid planting more than 50,000 ha to dry beans in the state, as of January 31, 2011, growers had planted 71,150 ha. The problem was that some growers had planned to plant corn, but finally decided that it was better to plant beans. Growers argued that many of them bet on beans this year because of favorable prices last year. SAGARPA and Sinaloa authorities promoted a planting program of no more than 50,000 hectares in order to avoid disrupting

the market. Nevertheless, growers disregarded the government's recommendation. The surplus production in the 2009/10 fall/winter crop cycle caused market disruption (see 2010 GAIN Report [MX0078](#) *Wheat, Feed Grains, and Rice Forecasts Unchanged But Dry Beans Production Forecast Higher*) for Sinaloa varieties (e.g., Azufrado and Mayocoba).

SAGARPA estimates that approximately 10,000 ha of beans were damaged by the cold weather at the beginning of February, the lowest temperatures since 1957, and should result in a reduction of nearly 20 percent of the expected production. Sources estimate that production may reach 65,000 MT in the 2010/11 fall/winter cycle. In addition, SAGARPA sources estimate the cold weather reduction in the yield from 1.8 MT/ha to 1.6 MT /ha, due to these weather problems.

### **Consumption:**

The Post/New MY2011/12 forecast for dry bean consumption is 1.18 MMT, an increase of approximately 1.2 percent over last year's revised estimate. This increase is driven by population growth expectations. Dry beans continue to be a basic staple in Mexico, despite the fact that Mexico has experienced a decline in consumption over the last few years. Increasingly both parents work outside of the home in Mexican families, which is forcing a change in the food consumption habits of many Mexicans. Because of the amount of time required to prepare beans, bean consumption has declined as the opportunity cost has increased. The Post/New MY2010/11 bean consumption estimate was revised downward, reflecting private and official information.

### **Trade:**

The Post/New import forecast is 120,000 MT in MY2011/12, a slight increase, as a result of the lower expected domestic production. This office adjusted import estimates upward for MY2010/11 due to lower-than-previously estimated domestic production. Similarly, the Post/New export estimate for MY2010/11 has been revised downward based on official data.

### **Stocks:**

The Post/New ending stocks estimate for MY2010/11 has been decreased to 250,000 MT because of lower than expected domestic production. For MY2011/12, ending stocks are forecast to decrease further as the trend of lower production continues.

### **Policy:**

In June 30, 2010, SAGARPA (through ASERCA) announced in Mexico's Federal Register (*Diario Oficial*) the specific guidelines for the regulations of a marketing scheme for dry beans. These guidelines are part of the GOM effort to stabilize the dry bean market, which were initially announced in October 2009 (see 2010 GAIN Report [MX0017](#) *Corn Production Forecast to Rebound*). On June 30, as well, SAGARPA published the first notice with the specific guidelines for the 2009/10 fall/winter cycle. The first notice stated that the total production to be supported was 210,000 MT in the states of Nayarit and Sinaloa. Furthermore, the first notice provided an additional support for marketing costs of 2,000 pesos per metric ton sold and tested in terms of "Net Review Weight (NRW)". This NRW is defined as a metric ton of beans, which has been reduced in weight based on generally accepted quality standards (e.g., moisture, foreign material or debris, pest damage, etc.) in each producing region. The additional 2,000 pesos/MT is given to buyers who demonstrate they acquired the beans at a price of

9,000 pesos/MT. Official sources stated that this program attempts to prevent the excessive intervention of intermediaries and directly protects the growers by establishing a minimum price per MT.

Industry sources stated that this scheme was implemented for the 2010 spring/summer crop in the states of Zacatecas, Durango and Chihuahua. However, the minimum price was fixed at 8 pesos per kilogram for the different bean varieties. The scheme seeks to support 50 percent of the crop marketed in these states. Moreover, it was agreed that the reference price would be adjusted every week according to USDA's Market News report and paid to growers.

# Production, Supply and Demand Data Statistics:

**Table 8. Mexico: Dry Bean Production, Supply and Demand for MY 2009/10 to 2001/12**

Dry Bean	2009			2010			2011		
<b>Mexico</b> 1000 MT; 1000 Ha & MT/HA)	2009/2010			2010/2011			2011/2012		
	Market Year Begin: Jan 2009			Market Year Begin: Jan 2010			Market Year Begin: Jan 2011		
	USDA Official	Old	New Post	USDA Official	Old	New Post	USDA Official	Old	New Post
		Post	Data		Post	Data		Post	Data
Area Harvested	0	1,260	1,268	0	1,560	1,510			1,285
Beginning Stocks	0	216	216	0	329	329			250
Production	0	1,111	1,111	0	1,160	1,000			950
MY Imports	0	172	172	0	100	115			120
TY Imports	0	172	172	0	100	115			120
TY Imp. from U.S.	0	148	148	0	90	107			112
Total Supply	0	1,499	1,499	0	1,589	1,444			1,320
MY Exports	0	20	20	0	30	29			15
TY Exports	0	20	20	0	30	29			15
Feed Consumption	0	0	0	0	0	0			0
FSI Consumption	0	1,150	1,150	0	1,190	1,165			1,180
Total Consumption	0	1,150	1,150	0	1,190	1,165			1,180
Ending Stocks	0	329	329	0	369	250			125
Total Distribution	0	1,499	1,499	0	1,589	1,444			1,320
Yield	0	0.8817	0.8762	0	0.7436	0.6623			0.7393

## Commodities:

# Production, Supply and Demand Data Statistics:



